

TABLE OF CONTENTS

<i>Preface</i>	
<i>Acknowledgments</i>	
<i>Author Affiliations and Areas of Contribution</i>	
<i>Notation</i>	
<i>Acronyms, Initialisms, and Abbreviations</i>	
<i>Chemical Symbols and Abbreviations</i>	
<i>Units of Measurement</i>	
Chapter 1	
INTRODUCTION	
1.1 Introduction.....	1-1
1.2 Format of This Book	1-2
Chapter 2	
BASIC METHODS AND CONCEPTS FOR MITIGATION ASSESSMENT	
2.1 Preparing for a Mitigation Assessment.....	2-1
2.2 The Structure of a Mitigation Assessment.....	2-2
2.3 Time Horizon in Mitigation Assessment.....	2-5
2.4 Approaches for Analysis of Mitigation Options.....	2-5
2.5 Screening Mitigation Options	2-7
2.6 Defining Scenarios.....	2-8
2.7 Cost-Benefit Analysis of Mitigation Options	2-11
2.8 Integration of Energy and Non-Energy Assessments	2-15
2.9 Integration with Emission Inventories and Vulnerability and Adaptation Assessments	2-16
Chapter 3	
MITIGATION ASSESSMENT OF THE ENERGY SECTOR: AN OVERVIEW	
3.1 Introduction.....	3-1
3.2 Structure of an Energy Sector Mitigation Assessment	3-1
3.3 Models for Energy Sector Mitigation Assessment.....	3-3
3.4 Key Steps in the Modeling Process	3-10
3.5 Key Challenges in the Modeling Process.....	3-11
3.6 Selection and Usability of Models for Mitigation Assessment.....	3-13
3.7 Designing and Setting Up a Bottom-up Analysis.....	3-16
3.8 Developing a Baseline Scenario.....	3-23
3.9 Developing Mitigation Scenarios	3-26
3.10 Cost Curves for GHG Abatement	3-28
3.11 Evaluating Macro-economic Implications of Mitigation Scenarios	3-32
Chapter 4	
INDUSTRIAL SECTOR	
4.1 Introduction.....	4-1
4.2 Mitigation Technology Options	4-1
4.3 Inputs for Industrial Sector Analysis	4-4
4.4 Developing Industrial Sector Scenarios	4-8
4.5 Mitigation Policies	4-11

Chapter 5	
RESIDENTIAL AND COMMERCIAL SECTORS	
5.1 Introduction.....	5-1
5.2 Mitigation Options	5-1
5.3 Inputs for Residential and Commercial Sector Analysis	5-4
5.4 Developing Residential and Commercial Sector Scenarios.....	5-7
5.5 Mitigation Policies	5-12
Chapter 6	
TRANSPORTATION SECTOR	
6.1 Introduction.....	6-1
6.2 Mitigation Options	6-2
6.3 Inputs for Transportation Sector Analysis	6-4
6.4 Developing Scenarios	6-6
6.5 Mitigation Policies	6-13
Chapter 7	
AGRICULTURAL SECTOR - ENERGY USES	
7.1 Introduction.....	7-1
7.2 Mitigation Options	7-1
7.3 Inputs for Agriculture Sector Analysis.....	7-3
7.4 Developing Scenarios	7-3
7.5 Mitigation Policies	7-5
Chapter 8	
CONVENTIONAL ENERGY SUPPLY	
8.1 Introduction.....	8-1
8.2 Mitigation Technology Options	8-1
8.3 Energy Resource Assessment.....	8-13
8.4 Energy Technology Characterization	8-14
8.5 Constructing Scenarios	8-17
8.6 Mitigation Policies	8-17
Chapter 9	
RENEWABLE ENERGY SUPPLY	
9.1 Introduction.....	9-1
9.2 Mitigation Technology Options	9-1
9.3 Resource Assessment.....	9-10
9.4 Technology Characterization	9-13
9.5 Constructing Baseline and Mitigation Scenarios	9-14
9.6 Mitigation Policies	9-15
Chapter 10	
INTRODUCTION AND A LAND-USE FRAMEWORK FOR THE NON-ENERGY SECTORS	
10.1 Introduction.....	10-1
10.2 Establishing Land-use Patterns for Mitigation Analysis	10-1

Chapter 11	
FORESTRY SECTOR	
11.1 Introduction.....	11-1
11.2 Mitigation Options	11-1
11.3 Comprehensive Mitigation Analysis Process (COMAP): Overview.....	11-3
11.4 Screening of Mitigation Options.....	11-5
11.5 Land Availability and Product Demand/Supply.....	11-5
11.6 Analysis of Mitigation Options	11-8
11.7 Cost Effectiveness-Evaluation.....	11-12
11.8 Defining Baseline and Mitigation Scenarios.....	11-13
11.9 Mitigation Policies	11-13
Appendix 11-1: Examples of Comprehensive Assessment Approaches for the Forestry Sector	11-18
Appendix 11-2: Estimating Net Present Value of Forests Managed in Perpetual Rotation	11-29

Chapter 12	
AGRICULTURE	
12.1 Introduction.....	12-1
12.2 Potential Mitigation Options.....	12-3
12.3 Constructing Baseline Scenarios.....	12-9
12.4 Analysis of Mitigation Options	12-12
12.5 Constructing Mitigation Scenarios	12-17
12.6 Mitigation Policies	12-17

Chapter 13	
RANGELANDS AND GRASSLANDS	
13.1 Introduction.....	13-1
13.2 Overview of Mitigation Options.....	13-1
13.3 Analytical Approaches for Rangelands Mitigation Assessment	13-2
13.4 Developing a Baseline Scenario.....	13-3
13.5 Analysis of Mitigation Options	13-5
13.6 Constructing a Mitigation Scenario(s).....	13-9
13.7 Policy Considerations.....	13-9
Appendix 13-1 The CENTURY Ecosystem Model	13-15

Chapter 14	
WASTE MANAGEMENT	
14.1 Introduction.....	14-1
14.2 Mitigation Options	14-1
14.3 Overview of Mitigation Assessment Process	14-5
14.4 Scenario Inputs.....	14-6
14.5 Analysis of Mitigation Options	14-7
14.6 Constructing Baseline and Mitigation Scenarios	14-8
14.7 Mitigation Policies	14-8

Chapter 15	
REPORTING A MITIGATION ASSESSMENT	
15.1 Introduction.....	15-1
15.2 Energy Sector	15-1
15.3 Non-energy Sectors	15-7
15.4 Summary of Energy and Non-energy Mitigation Assessments	15-8
15.5 Conclusion.....	15-9
GLOSSARY	G-1